

### REMARKS/ARGUMENTS

In view of the following remarks, Applicant respectfully requests reconsideration of the present application and allowance of the pending set of claims.

Claims 1 – 5 have been rejected as being unpatentable over the combination U.S. Patent Publication No. 2004/0155053 to Nishiyama and U.S. Patent No. 6,632,489 to Watanabe. Claims 13 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Nishiyama, Watanabe, and newly cited U.S. Patent No. 6,576,568 to Mandal et al. Claim 15 has been rejected under 35 U.S.C. § 102(e) as being anticipated by Watanabe.

In maintaining the rejections, the Office Action asserts the references can be combined because Nishiyama and Watanabe both allegedly teach forming a silica gel by acidification of an alkali silicate. The Office Action further alleges that the pore diameters described in Nishiyama are to the calcined powder form and therefore there is no teaching away from using the sol-gel of Nishiyama to form an ink absorbing film. However, Nishiyama clearly states at paragraphs 0006 to 0008 that the mesoporous silica, particulate form, and filmy form have pore diameters that are 1.0 to 3.0 nm. Contrary to the assertions of the Office Action, the small pore diameters of Nishiyama are not limited to the calcined form.

In Applicants' response dated February 15, 2006, Applicants pointed out that Watanabe states that in ink jet printing applications, silica compositions having small pore diameters are undesirable because the "amount of vacant space is too small to absorb ink sufficiently." See column 3, lines 16-20. As noted above, the silica composition described in Nishiyama has pore diameters on the order of 1 to 3 nm, which is significantly less than the pore diameters described in Watanabe. As a result, the pore diameters described in Nishiyama are too small to sufficiently absorb ink, and one of ordinary skill in the art would therefore not be motivated to use the silica composition described in Nishiyama in ink jet printing because the resulting film would be unsatisfactory for ink jet printing. Further, the small pore diameters of the composition described in Nishiyama would make Watanabe unsatisfactory for its intended purpose. Thus, the Office has failed to establish a *prima facie* case of obviousness because Nishiyama and Watanabe are not properly combinable.

With respect to Claims 13 and 14, the Office Action alleges that Mandal teaches a sol-gel that can be used to prepare a film having a dielectric constant of less than 2.3 and a modulus of elasticity between 5 and 50 GPa, and it would therefore be obvious to customize the sol-gel of Nishiyama and Watanabe to have the recited properties. However, there is no disclosure or suggestion in Nishiyama and Watanabe to produce a film having such properties or that such a film could even be produced from the described sol-gels. The sol-gel described in Mandal is completely different than that recited in the present claims or described in Nishiyama and Watanabe. It is clear that the Examiner is merely selecting properties from Mandal to make the rejection. Thus, the Examiner has failed to establish a *prima facie* case of obviousness, and Claims 13 and 14 are patentable over the cited references.

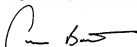
With respect to Claim 15, the Examiner alleges that Watanabe teaches condensing the silicate of formula (1) in the presence of acid to form a composition that is a combination of the condensation product and an organic solvent. The Examiner relies on column 8, line 50 through column 9, line 7 for this assertion. However, the excerpt relied on by the Examiner is the third step in a 4-step process of preparing colloidal silica particles, and does not disclose condensing the compound of formula (1) in the presence of an acid as suggested by the Examiner. Thus, the cited reference fails to disclose or suggest each and every limitation recited in Claim 15.

In view of the remarks made above, Applicant submits that the rejections under 35 U.S.C. § 102(e) and 103 have been overcome and that the pending claims are in condition for allowance. Applicant respectfully requests that the claims be allowed to issue. If the Examiner wishes to discuss the application or the comments herein, the Examiner is urged to contact the undersigned by telephone.

Appl. No.: 10/808,692  
Amdt. dated 06/20/2006  
Reply to Office action of 03/20/2006

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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